MATHEMATICAL CONNECTION ABILITY JUNIOR HIGH SCHOOL STUDENTS IN MATHEMATICS PROBLEM SOLVING

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Abstract

The purpose of this research was to determine the description of mathematical connections abilities on junior high school students grade VIII in mathematics problem solving. Subject retrieval is done by purposive sampling. The method used is a descriptive qualitative. The data collected is the result of students' written work. The results showed that the four indicators of mathematical connection ability of students in mathematics problem solving are fulfilled so that mathematics is an integral part of daily life that is inseparable.

Keywords:*Mathematical connection ability, Mathematics problem solving*

1 INTRODUCTION

Mathematics is a basic science that is useful for human life such as mathematics underpinning the development of modern technology, mathematics has an important role in various disciplines. In addition, with mathematics can advance the human mind power and even the daily human activities can not be separated from mathematics. The objectives of mathematics learning set out in the 2006 curriculum issued by National Education Department of Indonesia basically include (1) the connection between concepts in mathematics and their use in solving problems, (2) reasoning, (3) problem solving, (4) communication and representation, and (5) affective factors.Mathematics learning requires students to have good mathematical connection ability in order to be able to solve all math problems. Teachers as learning managers must be active as well as creative in managing learning. In the process of learning, teachers are expected to be able to create an active learning atmosphere involving students. A good teaching philosophy is not just transferring knowledge to students, but how to help students to learn. (Ali: 2009).

Mathematical problem solving enables students to be more critical and creative in making decisions in their lives. Learning problem solving refers to the mental process of an individual in facing a problem to further discover how to solve that problem through a systematic and careful thought process. Problem solving skills do not develop within few weeks or months and it is also not a topic that is thought in special class level. Development for the problem solving skill is slow and progressive. Problem solving should be expressed every day, in every lesson and should continue from the beginning of the preschool until high school, because learning of mathematics and problem solving are related to each other (Dilek, Lynn, &Recai: 2012). Problem solving is a complex mental process, involving visualization, imagination, abstraction, and assosiation of information (Abdul & Ansari: 2016).

The material mastery in solving mathematic problem much needs mathematical connection ability of the students. The ability of a mathematical connection is an essential skill that must be mastered by high school students. The importance of possessing mathematical